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HETEROMYSIS KENSLEYI AND *H. CORALINA*, NEW SPECIES FROM THE SHALLOW WATERS OFF LOOE KEY, FLORIDA (MYSIDACEA: HETEROMYSINI)

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Abstract.—Descriptions of *Heteromysis kensleyi* and *H. coralina*, new species from coral reef habitats off Looe Key, Florida, are presented.

Species in the genus *Heteromysis* appear to show considerable adaptive radiation in shallow waters of the Caribbean Sea and Gulf of Mexico (Modlin 1983). About 22 of these species are known to inhabit these waters. Eight occur in the waters off Florida. Brattegard (1969, 1970) reported collecting specimens of *H. formosa* in the vicinity of Ft. Pierce, *H. floridensis* in Biscayne Bay, and *H. nouveli* and *H. dispar* in the Florida Keys. *Heteromysis beetoni, H. guitarti, H. filitelsona,* and *H. hopkinsi* inhabit the Florida Middle Ground coral reef system northwest of Tampa, Florida, in the Gulf of Mexico (Modlin 1984). This paper describes two new species of *Heteromysis* from the waters off Looe Key, Florida.

Heteromysis kensleyi, new species
Fig. 1A–K

Material examined.—Male, 8.1 mm, holotype (USNM 229527); 2 males (6.0, 7.9 mm), 2 females (6.5, 7.7 mm), 3 ovigerous (6.4–8.5 mm), paratypes (USNM 229528) collected 27 Jan 1983, from upper spur and groove, vertical buttress wall with hard and soft corals, depth 6.1 m, sta FLK-24.—Male, 6.1 mm, collected 27 Jan 1983, from coral rubble at base of upper spur and groove buttress, depth 6.1 m, sta FLK-25.—Ovigerous female, collected 28 Sep 1982, from buttress wall region of spur and groove, depth 6.1 m, sta FLK-12, specimen dissected. Specimens were hand-collected by B. Kensley and M. Schotte at collecting sites previously poisoned.

Description.—Body large, robust. Carapace with anterior margin produced into triangular rostrum, posterior margin emarginate, exposing thoracic segments 7 and 8, postero- and anterolateral lobes rounded. Eyes large, oval, stalked; cornea rounded, dorsal margin scalloped, with prominent ocular tooth on anterosuperior edge.

Antennular peduncle 3-segmented; segment 1 about 1.1 times longer than segment 3; segment 2 compressed, with short spine and plumose seta distomedially; segment 3 with 3 short simple setae on medial edge, robust spine, inconspicuously flagellated, about 0.7 times length of medial margin of segment 3 (flagellum visible only with aid of very high magnification) and three small setae distomedially, midventral male lobe prominent with less than 10 hair-like setae.

Antennal peduncle 3-segmented, about 1.7 times longer than scale; segment 1 inconspicuous; segment 2 about 1.6 times longer than segment 3, one long and one short naked seta, and one long plumose seta distomedially; segment 3 with 3 naked setae distomedially. Antennal scale blade-like, medial margin strongly convex, lateral margin slightly convex, setose all around, apical tip about 0.06 times scale length.

Right and left mandibles with blade-like incisors, right lacinia mobilis saddle-like with 4 tall cusps, left pedestal-like with 4 low cusps; each mandible with 3 robust se-

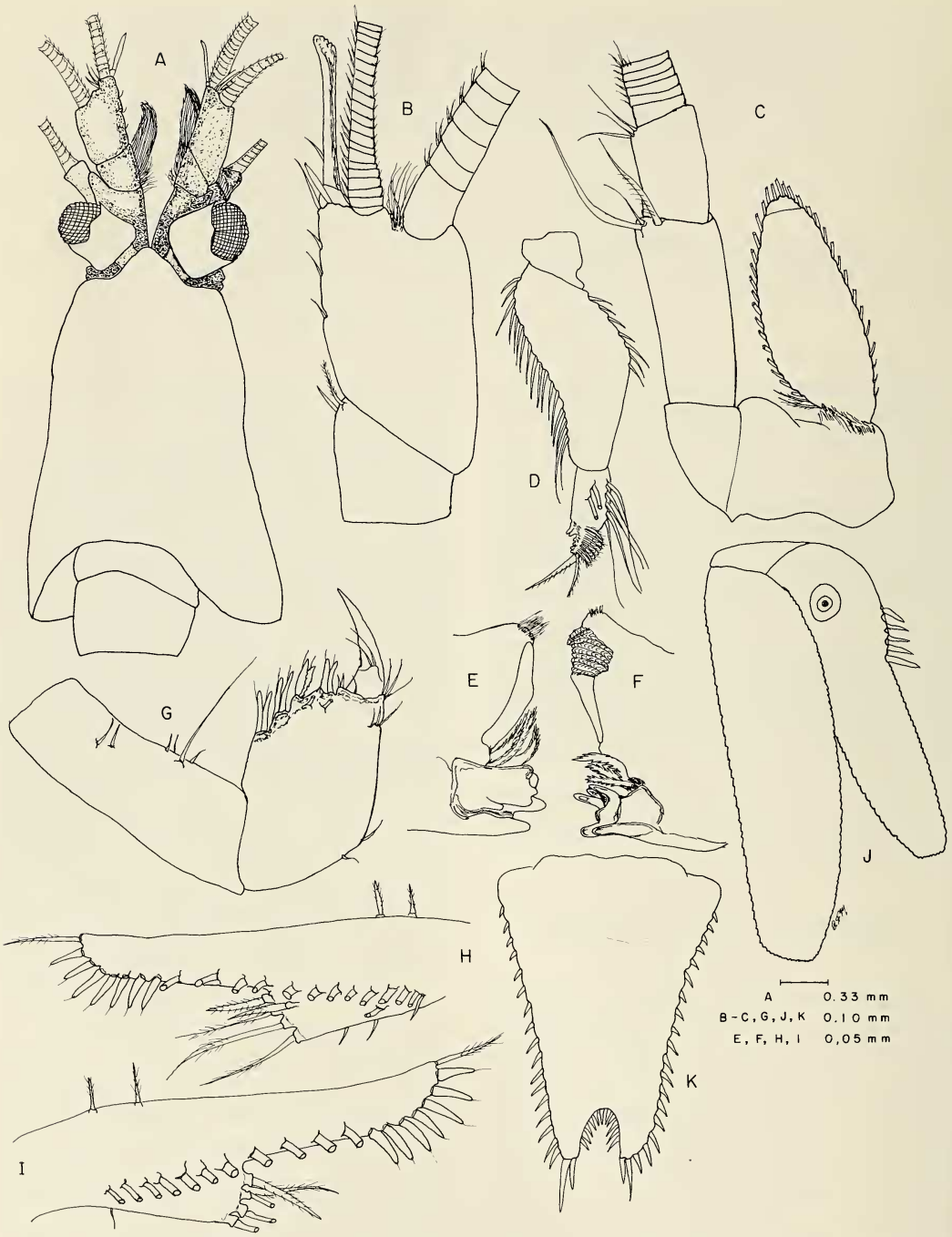

Fig. 1. *Heteromysis kensleyi,* new species: A, Carapace; B, Antennular peduncle; C, Antennal peduncle and scale; D, Mandibular palp; E, Left mandible; F, Right mandible; G, Thoracic endopod 3; H, Pleopod 3; I, Pleopod 4; J, Uropod; K, Telson. A = male, 8.1 mm; B, H, I = male, 7.9 mm; C–G, J, K = female, 6.5 mm.

tose accessory blades; right molar surface rugose distally, left plate-like along entire length. Mandibular palp 3-segmented; segment 1 inconspicuous; segment 2 expanded, medial margin with 7 setae proximally, lateral margin with 17–19 setae along entire length; segment 3 about 0.4 times length of segment 2, medial margin slightly sinuous, proximal half with 7 naked setae, lateral margin with 8 short spined setae and 6–7 tubercles distally, distal tip with long plumose seta and robust spined claw.

Labium, maxillule, maxilla, and paragnaths typical of genus.

Thoracic endopod 1 and 2 typical of genus. Thoracic endopod 3-merus, about 1.2 times longer than carpopropodus, medial margin with 2 short simple setae proximally, one long and 3 short simple setae in group distally; medial margin of carpopropodus with 8 robust, subequal flagellated spines arranged in pairs, anterior edges of center 2 pairs serrate, one long simple seta submarginal to each anterior pair of spines, 3 short simple setae anterior to spinal group, lateral margin with 2 simple setae in proximal half, 2 groups of 3 short simple setae distally; dactylus conspicuous with 2 simple setae proximally. Carpopropodus of thoracic endopod 4 with 3 segments; carpopropodus of thoracic endopods 5–8 with 8 segments. Thoracic exopods 2–8 with 10 segments.

Pleopods unsegmented; male pleopods 1, 2, and 5 not differentiated. Pleopod 3 with 13 long naked setae on anterior surface, 7 flagellated spines on distal margin, one long plumose seta distolaterally, 2 short plumose setae on lateral margin proximally, 2 short naked setae on medial margin, pseudobranchial lobe with one short and 4 long plumose setae. Pleopod 4 with 11–13 long naked setae on anterior surface, 7–8 flagellated spines on distal margin, one long plumose seta distomedially, 2 short plumose setae on lateral margin proximally, 1–2 short simple setae on medial margin, pseudobranchial lobe with one short and 4 long plumose setae. Female pleopods rudimentary.

Uropod exopod about 1.1 times longer than endopod, lateral margin straight, medial margin slightly convex, setose all around. Endopod linguiform with 5 robust spines on medial margin in region of statocyst, entire margin setose.

Telson about 0.8 times as long as exopod of uropod, lateral margins slightly concave, completely spined with 19–20 marginal spines (apical spines included), outer apical spine about 1.7 times longer than inner, cleft 0.15 times the length of the telson, completely spined with 11 spines.

Remarks.—Characteristics of *H. kensleyi* place it near *H. bredini* (Brattegard, 1970) and *H. tuberculospina* (Modlin, 1987). It differs from both by having a very long inconspicuously flagellated spine on the distomedial edge of segment 3 of the antennule peduncle. On *H. bredini* and *H. tuberculospina* this spine is less than 0.2 times the length of the medial margin of antennule peduncle segment 3 rather than 0.7 times. Carpopropodus of thoracic endopod 3 of *H. kensleyi* has eight flagellated spines arranged in four pairs, while that of *H. bredini* and *H. tuberculospina* has, respectively, ten and seven. Spines in the telsonal cleft of *H. kensleyi, H. tuberculospina,* and *H. bredini* number, respectively, 11, 20 and 31. Mandibular structure of *H. kensleyi* varies distinctly from that of *H. tuberculospina.* Distal margins of male *H. kensleyi* pleopods 3 and 4 each have seven distal spines, while those of *H. tuberculospina* have ten each. Mandibles and male pleopods of *H. bredini* have not been described.

Ecological Notes.—Ovigerous females carried 2–4 eggs or larvae. Specimens of *H. dispar* Brattegard and *H. coralina,* new species, were collected with *H. kensleyi.*

Etymology.—Named for Dr. Brian Kensley, U.S. National Museum of Natural History, who kindly provided me with his Looe Key mysid collection and who has done

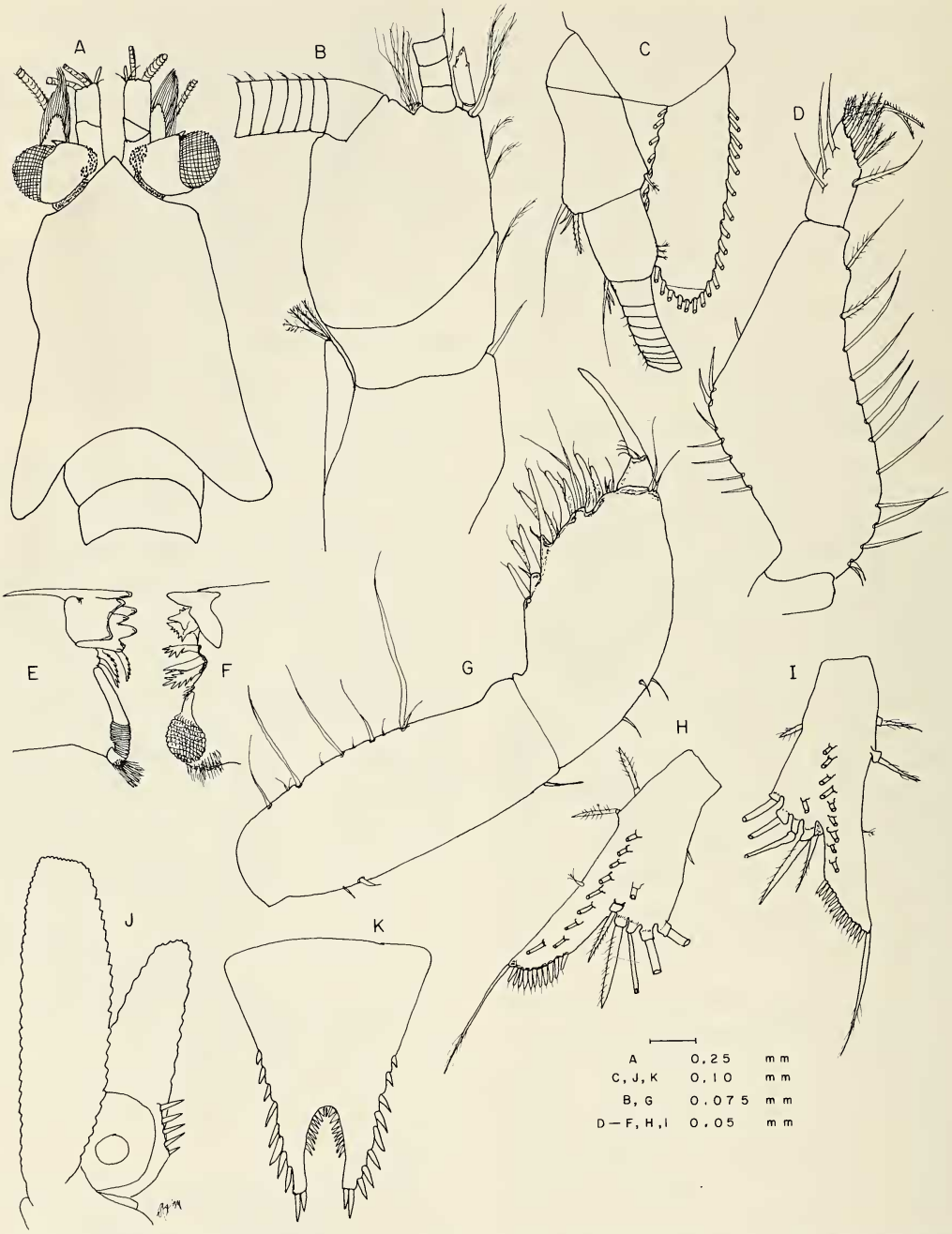

Fig. 2. *Heteromysis coralina,* new species: A, Carapace; B, Antennular peduncle; C, Antennal peduncle and scale; D, Mandibular palp, E, Left mandible; F, Right mandible; G, Thoracic endopod 3; H, Pleopod 3; I, Pleopod 4; J, Uropod; K, Telson. A–K = male, 4.9 mm.

much to forward systematical and ecological knowledge of the Caribbean Sea Isopoda.

Heteromysis coralina, new species
Fig. 2A–K

Material examined.—Female, 5.2 mm, holotype (USNM 229529); 4.9 mm male (dissected on 6 microscope slides), 4.3 mm female, 3.1 mm juvenile, paratypes (USNM 229530); and 5.0 mm male (badly damaged) collected 27 Jan 1983 from upper spur and groove, vertical buttress wall with hard and soft corals, depth 6.1 m, hand collected at station FLK-24 in area previously poisoned.

Description.—Body small, robust. Carapace with anterior margin produced into triangular rostrum, posterior margin emarginate exposing thoracic segments 7 and 8, anterolateral lobes rounded, posterolateral lobes angular. Eyes large, stalked, oval with posteromedial region produced and covered with regularly arranged minute denticles; cornea small, oval, prominent ocular tooth on anteromedial edge.

Antennular peduncle 3-segmented; segment 1 as large as segment 3 with distinct lateral process having 4 plumose setae on apex, simple seta distomedially; segment 2 compressed; segment 3 with 2 plumose setae on medial margin; anterior margin with 2 long plumose setae and a strong blade-like spine medially with inconspicuous flagellum (flagellum visible only with aid of very high magnification), male lobe with few hair-like setae ventrally.

Antennal scale blade-like, apical segment about 0.05 times length of scale, setose all around. Antennal peduncle 3-segmented, 1.1 times length of scale, segment 1 small, inconspicuous; segment 2 with one long and 2 small simple setae, and one robust spined seta distomedially, one minute plumose seta distolaterally; segment 3 about 0.7 times length of segment 2, one long and 2 short simple setae distomedially, 3 minute plumose setae on lateral margin distally.

Mandibles and palp: right and left mandibles with blade-like incisors, right incisor with prominent anterior cusp, left incisor with 2 anterior cusps; right lacinia mobilis, small, with serrate edges and 2 prominent spike-like cusps, left with 4 cusps; each mandible with 3 strong setose accessory blades; right molar surface strongly rugose posteriorly with setose clumps at anterior and posterior edges; left molar surface, anterior half plate-like, posterior half with minute rugae, setose clump at posterior edge. Mandibular palp 3-segmented; segment 1 small, inconspicuous; segment 2 expanded, anterior margin with 8 simple setae, lateral margin with 11–12 simple setae and 2 distal spined setae; segment 3 with 3 long simple setae near anterior margin, posterior margin sinuous, proximal half with one spined seta, distal half with 12–14 spined setae and 2 long spined claws on apex.

Labium, maxillule, maxilla and paragnaths typical of genus.

Thoracic endopods 1 and 2 typical of genus. Thoracic endopod 3 lateral margin of merus with 2 small simple setae proximally and 1 simple seta distally, medial margin with 5 long simple setae interspersed with 1–2 small simple setae; medial margin of carpopropodus with 9 robust flagellated spines, 8 arranged in pairs with single spine proximally, 3 small and 2 long setae distally, lateral margin with 3 short simple setae proximally and 3 longer simple setae distally; dactylus with 4 minute setae distally and prominent claw. Thoracic endopod 4 with 3-segmented carpopropodus. Thoracic endopods 5–8 with 6-segmented carpopropodus. Exopod 1 and 2 with 8 segments; exopods 3–8 with 9 segments.

Pleopods unsegmented. Male pleopods 1, 2 and 5 not differentiated. Pleopod 3 with 10 long plumose setae on anterior surface, distal margin with 8–11 flagellated spines and one long plumose seta distolaterally,

lateral margin with 2 spined setae proximally and one minute flagellated seta distally, medial margin with one minute seta proximally, pseudobranchial lobe with 3 long and 2 short plumose setae. Pleopod 4 with 10 long plumose setae on anterior surface, distal margin with 14–15 flagellated spines and one long plumose seta distolaterally, lateral margin with 2 spined setae proximally and one minute plumose seta distally, lateral margin with one spined seta, pseudobranchial lobe with 3 long and 2 short plumose setae. Female pleopods rudimentary.

Uropods: exopod about 1.2 times longer than endopod, lateral margin straight, medial margin convex, setose all around; endopod, linguiform, with 5 prominent spines medially in region of statocyst, setose all around.

Telson about 0.8 times length of exopod of uropod, distal ⅔ of lateral margins each with 10 spines (apical spines included) that increase in length distally, outer apical spine 1.5 times longer than inner; telsonal cleft with 19–20 small spines concentrated in proximal half, 0.3 times length of telson.

Remarks.—*Heteromysis coralina* appears closely related to *H. beetoni,* but it differs by having five rather than nine spines in the region of the statocyst on the endopod of the uropod; 19–20 spinules in the proximal half of the telsonal cleft rather than 15–17; nine flagellated spines on the carpopropodus of the thoracic endopod 3 rather than eight; 9–11 and 14–15 flagellated spines, respectively, on the distal margins of male pleopods 3 and 4. Male pleopods 3 and 4 of *H. beetoni* have seven and 20, respectively. Additionally, the design of the mandibular surfaces of the two species differ radically.

Ecological notes.—Specimens of *H. dispar* Brattegard and *H. kensleyi* occurred in the same sample as *H. coralina.*

Etymology.—Named for the habitat from which this species was collected.

Acknowledgments

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